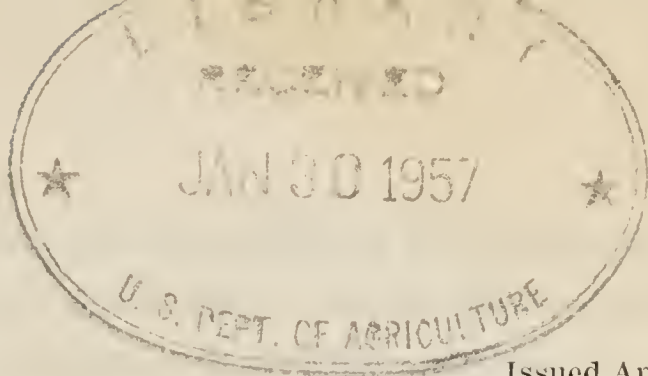


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B. S. Doc. 103.

Issued April 13, 1916.

# United States Department of Agriculture,

## BUREAU OF BIOLOGICAL SURVEY.

HENRY W. HENSHAW, Chief of Bureau.

### INSTRUCTIONS FOR TAKING BIRD CENSUS, 1916.

Bird censuses were taken by voluntary observers during the summers of 1914 and 1915, and it is desired to continue the work during the summer of 1916. The returns for these two years were very satisfactory for the average farm conditions in the United States east of the Plains and north of North Carolina. While it is hoped that the censuses in this part of the country will be repeated this year with equally satisfactory results, it is especially desired that the present season yield a series of censuses indicating the bird life on the Plains, the semiarid lands, and the deserts, both with and without irrigation; in the mountains of the West and the fruit districts of the Pacific slope; and in the South Atlantic and Gulf States, to represent both the uplands and the low coastal plain. These censuses will serve as a basis for determining what effect the present State and Federal laws may have on the increase of game and insectivorous birds.

Each person receiving this pamphlet is invited to aid in the work by taking a census of the birds breeding this summer on some area or areas selected to represent fairly the average farm conditions, but without much woodland. The tract should not be less than 40 acres—a quarter of a mile square—nor more than 80 acres, and should include the farm buildings, with the usual shade trees, orchards, etc., as well as fields of plowed land and of pasture or meadow.

The area should be selected not only with reference to the present summer's work, but should, if possible, be chosen so that the physical conditions will not be much changed for several years. If succeeding annual censuses show changes in the bird population, it will be known that they are not due to changed environment.



What is wanted is a census of the pairs of birds actually nesting within the selected area. Birds that visit the area for feeding purposes should not be counted, no matter how close their nests are to the boundary lines.

It is practically impossible to take this census on an area of 40 to 80 acres in a single day. A plan which has been used for several years near Washington, D. C., is to begin at daylight some morning the last of May or the first week in June and zigzag back and forth across the area, counting the male birds. Early in the morning at that season every male bird should be in full song and easily counted, and, since migration is ended and the birds are settled in their summer quarters, each male can safely be considered to represent a breeding pair.

The census of one day should be checked and revised by several days of further work in order to insure that each bird seen is actually nesting within the area and to make certain that no species has been overlooked.

The height of the breeding season should be chosen for this work. In the latitude of Washington, D. C.—latitude  $39^{\circ}$ —May 30 is about the proper date for the original census. In the latitude of Boston the work should not begin for a week later, while south of Washington an earlier date should be selected. For the western part of the country no definite dates can be laid down, since the proper time will vary according to latitude and altitude, but—and this applies to all localities—a date should be selected shortly after the close of migration and during the early part of the nesting season.

The final results of the census should be sent to this bureau about June 30, and should be accompanied by a statement of the exact boundaries of the selected area, defined so explicitly that it will be possible 25 years hence to have the census repeated. The name of the present owner should be given, together with a careful description of the character of the land, including a statement whether the area is dry upland or moist bottom land; the *number of acres* in each of the principal crops, or in permanent meadow, pasture, orchard, swamp, roads, etc.; the kind of fencing used, and whether there is much or little brush along any fence, roads, or streams, or in the permanent pasture.

If there is an isolated piece of woodland conveniently near and comprising 10 to 20 acres, a separate census made of the birds nesting

therein is desired. In this case the report, in addition to the size and exact boundaries of the wooded tract, should state the principal kinds of trees and whether there is much or little undergrowth.

A third census desired is that of some definite timbered area—40 acres, for instance—forming a part of a much larger tract of timber, either deciduous or evergreen. While the number of birds on such an area will differ from that on an equal area of mixed farm land, their correct enumeration will require considerably more care and time.

Still a fourth census, supplementary to those made the past two years, is desired. The average farm in the Northeastern States contains about 100 acres, and the average census received during the past two years gives the count of the birds nesting on the 50 acres of the farm nearest to and including the farm buildings. It is desired during 1916 to obtain some censuses of the remainder of the farm, the wilder part containing no buildings. Such censuses will be especially valuable if made on the same farms where the censuses about the buildings have already been taken.

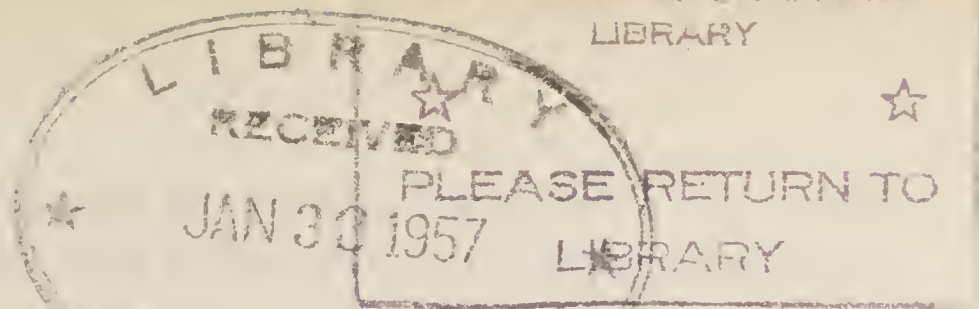
These four kinds of bird censuses are desirable for a study of the relative abundance and shifting numbers of birds under changing or stationary conditions, and it is hoped that many persons interested in our bird life will take one or more censuses this season. As the department has no funds to pay for this work, we must depend wholly on voluntary observers.

HENRY W. HENSHAW,  
*Chief, Biological Survey.*





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